

WHAT IS CLAIMED IS:

1. A fiber laser apparatus comprising:  
a plurality of semiconductor lasers; and  
an optical fiber which beams emitted from said  
5 plurality of semiconductor lasers are caused to enter,  
said plurality of semiconductor lasers being so  
arranged that the emitted beams are almost parallel to  
one another in a slow-axis direction and the incidence  
angles of the emitted beams to the optical fiber differ  
10 from one another in a fast-axis direction.
2. The fiber laser apparatus according to  
claim 1, wherein the value of (active layer width in  
slow-axis direction)  $\times$  [sin (emission divergence angle  
in slow-direction angle)] of each of the semiconductor  
15 lasers is set equal to or smaller than the value of  
(core diameter)  $\times$  (numerical aperture) of the optical  
fiber.
3. The fiber laser apparatus according to  
claim 1, wherein the sum of the values of (active layer  
20 width in fast-axis direction)  $\times$  [sin (emission  
divergence angle in fast-direction angle)] of said  
plurality of semiconductor lasers is set equal to or  
smaller than the value of (core diameter)  $\times$  (numerical  
aperture) of the optical fiber.
- 25 4. The fiber laser apparatus according to  
claim 1, further comprising a mirror which changes the  
optical path of at least one of the beams emitted from

said plurality of semiconductor lasers and causes the beam to enter the optical fiber.

5        5.    The fiber laser apparatus according to claim 1, wherein the beams emitted from said plurality of semiconductor lasers are caused to enter the optical fiber with a specific angle difference between their optical axes of the beams in the fast-axis direction.